

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 17 Oct 1928

Date of writing Report 3.10.28 When handed in at Local Office 10 Port of GLASSGOW.

No. in Survey held at GREENOCK. Date, First Survey 23.8.28 Last Survey 2.10.1928
 Reg. Book. 92659 on the M. V. WINTON. (Number of Visits 6)

Built at PORT GLASSGOW. By whom built W^M HAMILTON & CO (1928) LTD Yard No. 404 When built 1928.

Owners THE AVENUE SHIPPING CO. LTD Port belonging to LONDON.

Electric Light Installation fitted by MESSRS TELFORD GRIER & MCKAY Contract No. 404 When fitted 1928

Tons { Gross 4387.7
 Net 2570

System of Distribution Two Wire

Pressure of supply for Lighting 220 volts, Heating 220 volts, Power 220 volts.

Direct or Alternating Current, Lighting Direct Power Direct

If alternating current system, state frequency of periods per second —

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off yes

Generators, do they comply with the requirements regarding rating yes, are they compound wound yes

are they over compounded 5 per cent. yes, if not compound wound state distance between each generator —

Where more than one generator is fitted are they arranged to run in parallel yes, is an adjustable regulating resistance fitted in series with each shunt field yes

Are all terminals accessible, clearly marked, and furnished with sockets yes, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched yes Are the lubricating arrangements of the generators as per Rule yes

Position of Generators Port Side Lower Engine Room.

is the ventilation in way of the generators satisfactory yes, are they clear of all inflammable material yes

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators — and —, are the generators protected from mechanical injury and damage from water, steam or oil yes

are their axes of rotation fore and aft yes

Earthing, are the bedplates and frames of the generating plant efficiently earthed yes are the prime movers and their respective generators in metallic contact yes

Main Switch Boards, where placed on Bulkhead beside Generators.

If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard —

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes yes, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards — and —, are they constructed wholly of durable, non-ignitable non-absorbent materials yes, is all insulation of high dielectric strength and of permanently high insulation resistance yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework — and is the frame effectively earthed yes Are the fittings as per Rule regarding: — spacing or shielding of live parts yes, accessibility of all parts yes, absence of fuses on back of board yes, proportion of omnibus bars yes, individual fuses to voltmeter, pilot or earth lamp yes, connections of switches yes

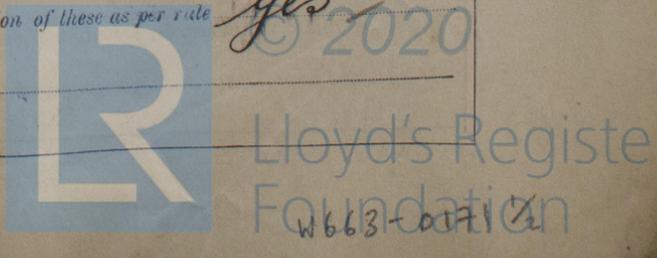
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches. 3 Pole O.L. & Reverse Circuit Breakers (D.P. & Equalizer) Two Winch Circuits each with D.P. Overload Ct. Breaker. Remaining outgoing Circuits D.P. Switch & Two S.P. Fuses

Instruments on main switchboard three ammeters three voltmeters — synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system Lamp Switch & fuse in Circuit between each Bus Bar & Earth

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules yes

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule yes



11484

Cables: Single, twin, concentric, or multicore Single & twin are the cables insulated and protected as per Tables IV or V of the Rules yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 4.4 volts

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets yes

CAMBRIC
Paper Insulated Cables. If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound yes

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage yes

Support and Protection of Cables, state how the cables are supported and protected Main cables are carried on Trays on Deck & protected with strong sheet steel cover plate
If cables are run in wood casings, are the casings and caps secured by screws —, are the cap screws of brass —, are the cables run in separate grooves —. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII yes

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements none

Joints in Cables, state if any, and how made, insulated, and protected none

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands yes

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed yes state the material of which the bushes are made lead

Earthing Connections, state what earthing connections are fitted and their respective sectional areas —
are their connections made as per Rule yes

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule yes

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven none

Navigation Lamps, are these separately wired yes, controlled by separate switch and separate fuses yes, are the fuses double pole yes, are the switches and fuses grouped in a position accessible only to the officers on watch yes, has each navigation lamp an automatic indicator as per Rule yes

Secondary Batteries, are they constructed and fitted as per Rule none

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight yes, are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected none, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected none, how are the cables led —, where are the controlling switches situated —

Searchlight Lamps, No. of none, whether fixed or portable —, are their fittings as per Rule —

Arc Lamps, other than searchlight lamps, No. of none, are their live parts insulated from the frame or case —, are their fittings as per Rule —

Motors, are their working parts readily accessible yes, are the coils self-contained and readily removable for replacement yes, are the brushes, brush holders, terminals and lubricating arrangements as per Rule yes, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material yes, are they protected from mechanical injury and damage from water, steam or oil yes, are their axes of rotation fore and aft yes, if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type —, if not of this type, state distance of the combustible material horizontally or vertically above the motors — and —

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule yes

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule yes

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings —
If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office —

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	Three	75 each	220	341	230	Diesel Engine	Diesel Oil	above 150°.
AUXILIARY ...								
EMERGENCY ...								
ROTARY TRANSFORMER								

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR each	one	.3	34	.103	341	20 yds	Cambric	L.C. & A.
	EQUALISER CONNECTIONS	one	.25	34	.093		10 yds	"	L.C. & A.
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM								
	BOILER ROOM								
	ACCOMMODATION								
	Forward	one	.0045	4	.029	5	140 yds	V.P.R.	L.C. & A.
	Midships	one	.0045	4	.029	9	32 "	V.P.R.	L.C. & A.
	Aft Cargo	one	.0045	4	.029	5	104 "	V.P.R.	L.C. & A.
	Crew	one	.0045	4	.029	3	140 "	V.P.R.	L.C. & A.
	Engine Room	one	.0045	4	.029	4	10 "	V.P.R.	L.C. & A.
	Navigation	one	.0045	4	.029	3	124 "	V.P.R.	L.C. & A.
	Saloon Heaters	one	.04	19	.052	60	90 "	V.P.R.	L.C. & A.
	Engineers Heaters	one	.04	19	.052	55	32 "	V.P.R.	L.C. & A.
	Saloon Boilers	one	.04	19	.052	63	90 "	V.P.R.	L.C. & A.
	Crew Heaters	one	.04	19	.052	60	124 "	V.P.R.	L.C. & A.
	WIRELESS	one	.0045	4	.029		120 "	V.P.R.	L.C. & A.
	SEARCHLIGHT								
	MASTHEAD LIGHT								
	SIDE LIGHTS								
	COMPASS LIGHTS								
	POOP LIGHTS								
	CARGO LIGHTS								
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP	one	.06	19	.064	42	56 yds	V.P.R.	L.C. & A.
	MAIN BILGE LINE PUMPS	one	.0225	7	.064	38	56 yds	V.P.R.	L.C. & A.
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
	CIRC. WATER PUMP	one	.04	19	.052	56	144 yds	V.P.R.	L.C. & A.
	CIRC. FRESH WATER PUMP	one	.04	19	.052	56	144 yds	V.P.R.	L.C. & A.
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR	one	.0225	7	.064	42	45 yds	V.P.R.	L.C. & A.
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP	one	.004	4	.036	22	42 yds	V.P.R.	L.C. & A.
	WINDLASS	one	.15	37	.042	164	66 yds	V.P.R.	L.C. & A.
one hr rated	WINCHES, FORWARD	5	.25	37	.093	376	130 yds	Cambric	L.C. & A.
1/2 hr rated	WINCHES, AFT	5	.25	37	.093	376	85 yds	Cambric	L.C. & A.
	STEERING GEAR								
	(a) MOTOR GENERATOR								
1 hr rated	(b) MAIN MOTOR	one	.04	19	.052	44	160 yds	V.P.R.	L.C. & A.
	WORKSHOP MOTOR	one	.004	4	.036	16	30 yds	V.P.R.	L.C. & A.
	VENTILATING FANS								
1 hr rated	Midship Winch P.	one	.045	19	.042	94	48 yds	V.P.R.	L.C. & A.
1 hr rated	Midship Winch S.	one	.045	19	.042	94	56 yds	V.P.R.	L.C. & A.
	No. 1 Oil Purifier	one	.0045	4	.029	12	48 yds	V.P.R.	L.C. & A.
	No. 2 Oil Purifier	one	.0045	4	.029	12	48 yds	V.P.R.	L.C. & A.
	Fuel Oil Heater	one	.12	37	.064	123	49 yds	V.P.R.	L.C. & A.
	Refrigerating	one	.004	4	.036	23	80 yds	V.P.R.	L.C. & A.
	No. 1 Lub. Pump	one	.0225	7	.064	42	66 yds	V.P.R.	L.C. & A.
	No. 2 Lub. Pump	one	.0225	7	.064	42	66 yds	V.P.R.	L.C. & A.
	Purified Oil	one	.0045	4	.029	8	46 yds	V.P.R.	L.C. & A.

All Conductors are of annealed copper conforming to British Standard Specification No. 7.
 The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.
 The foregoing is a correct description.

Telford Grier Mackay & Co Electrical Engineers. Date 8-10-28

COMPASSES.

Distance between electric generators or motors and standard compass 84 feet
 Distance between electric generators or motors and steering compass 88 feet
 The nearest cables to the compasses are as follows:—
 A cable carrying 3 Ampères 12 feet from standard compass 6 feet from steering compass.
 A cable carrying 1/4 Ampères one feet from standard compass one feet from steering compass.
 A cable carrying _____ Ampères _____ feet from standard compass _____ feet from steering compass.
 Have the compasses been adjusted with and without the electric installation at work at full power yes
 Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted yes
 The maximum deviation due to electric currents was found to be nil degrees on any course in the case of the standard compass, and nil degrees on any course in the case of the steering compass.

WILLIAM HAMILTON & CO. (1928) Limited Builder's Signature. Date 10/10/28

Is this installation a duplicate of a previous case no. If so, state name of vessel _____

General Remarks (State quality of workmanship, opinions as to class, &c.) This installation has been fitted on board under special survey. Tested under full load conditions and found satisfactory. The materials and workmanship were found to be good and sound.

It is submitted that this vessel is eligible for THE RECORD Elec. Light.

a.b.
15/10/28

Total Capacity of Generators 284 Kilowatts.

The amount of Fee ... £ 37.2.0 : When applied for, at work 19...
 Travelling Expenses (if any) £ 1.1.0 : When received, 14.9.28

J. S. Rankin
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 16 OCT 1928
 Assigned Elec. Light.

1m.1.27.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minutes.)

